

## 46E-5

### Development and optimization of a choco-peanut spread

F. F. GALVEZ<sup>1</sup>, B. J. Villarino, M. B. Aquino, A. O. Lustre<sup>4</sup>, and A. V. A. Resurreccion<sup>5</sup>. (1) Department of Food Science and Nutrition, University of the Philippines Diliman, College of Home Economics, Quezon City, 1101, Philippines, (2) Food Development Center, National Food Authority, Department of Agriculture, Taguig, MetroManila, Philippines, (3) Department of Food Science and Technology, University of Georgia, Georgia Agricultural Experiment Station, 1109 Experiment St., Griffin, GA 30223-1797

The recent nationwidesurvey on Filipino consumers' preferences for peanut butter revealed that peanut butter consumers would want to have added flavors in their peanut butter. The flavor that is most preferred by consumers is chocolate. Development of a choco-peanut spread would encourage growth and diversification in the consumption of peanut products since consumers are given new and better choices. The study was conducted to develop and optimize a choco-peanut spread that is acceptable to the consumers using mixture response surface methodology. Specifically, the best type of chocolate flavor was determined and the roasting time at 140°C and amounts of chocolate, peanuts, and sugar in the formulation were optimized. A three-variable (amounts of peanuts, chocolate flavor, and sugar) constrained mixture design was used for each of two types of chocolate flavors (cocoa powder and chocolate syrup) studied to optimize the formulation for a choco-peanut spread that is acceptable to the consumers. In addition, the effect of roasting time (40, 50, and 60 min) at 140°C was likewise studied. Descriptive sensory analysis and consumer acceptability tests were conducted on the products. Regression analysis was performed and optimum conditions were determined using mixture response surface methodology. A choco-peanut spread that is acceptable to the consumers may be produced using either cocoa powder or chocolate syrup. When using cocoa powder, a choco-peanut spread that is acceptable to the consumers may be produced with any of the combinations of 69-79% peanuts, 15-25% sugar, and with a maximum of 6% cocoa powder in the formulation. When using chocolate syrup, a choco-peanut spread that is acceptable to the consumers may be produced with any of the combinations of 35-75% peanuts, 19-25% sugar, and with a maximum of 40% chocolate syrup in the formulation. Roasting the peanuts for 40 min at 140°C gave the best results. When the industry collaborator starts marketing this product, it will contribute to the economic growth of the country and offer a diversification in the peanut products available to the consumers in the market.

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